

said measured parameter differs from a predetermined value.

21. Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network as set forth in claim 20, wherein:

said parameter comprises a sequence number associated with the payload portion of said data packet.

22. Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network as set forth in claim 20, wherein:

said parameter is derived from measurement of the difference in arrival times of packets sent across the network and back between a first packet and a second packet.

23. Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network as set forth in claim 20, wherein:

said parameter is derived from measurement of the difference in arrival times of packets sent across the network and back between the average value of arrival times of a group of packets and a second packet.

24. Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in a network as set forth in claim 21, wherein:

sequence numbers of the data packets are stored in a register.

25. Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in a network as set forth in claim 24 wherein:

sequence numbers associated with successive data packets are stored in the register.

26. Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network as set forth in claim 25 wherein:

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the sequence of sequence numbers associated with stored successive data packets is monitored.

27. Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising as set forth in claim 26 wherein:

a counter in the register is incremented by a count of one when the sequence numbers of successive data packets stored are in sequential order; and

the counter is incremented by a count greater than one when the sequence numbers of successive data packets stored are out of sequential order.

28. Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network as set forth in claim 27, wherein:

bandwidth optimization is initiated when the counter count is incremented by a count greater than one.

29. Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network as set forth in claim 28, wherein:

bandwidth optimization comprises static optimization.

30. Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network as set forth in claim 29, wherein:

static optimization comprises limiting the number of channels available on the network.

31. Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network as set forth in claim 28, wherein:

bandwidth optimization comprises adaptive optimization.

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32. Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network as set forth in claim 29, further comprising:

adaptive optimization apparatus which determines which channels are physically represented by cards connected to a PBX network cabinet.

33. Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising as set forth in claim 29, wherein:

adaptive optimization determines whether a channel is inactive and re-maps an active channel to an available inactive one.

34. Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising:

a monitoring system which monitors the network cards capable of being physically connected to a cabinet;

the monitoring system determines which cards are not present and associates channels of a packet with only the cards which are physically present.

35. Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising:

monitoring apparatus which monitors channels on a network to determine whether any channels are idle and maps active channels from the end of a packet to an available idle channel.

36. Apparatus for dynamically adapting a PBX network to maintain a Quality of Service level in the network comprising:

monitoring apparatus which monitors channels associated with a plurality of network cards, determines whether all channels in a given card are idle, and eliminates

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